



Tab 7

## Report on High School Graduates Performance

Coordinating Board for Higher Education  
March 16, 2023

### BACKGROUND

The Coordinating Board for Higher Education's Missouri Report on High School Graduates Performance tracks Missouri's public high school graduates entering the state's public two- and four-year degree-granting postsecondary institutions as first-time full-time degree-seeking undergraduate students in the fall semester following their high school graduation. The annual report, which was first issued in 1996, provides information to secondary and postsecondary stakeholders regarding student preparation, persistence, and completion.

The law that authorizes the CBHE to prepare the annual report (§ 173.750, RSMo) describes the report's contents, which must include "grade point averages after the initial college year...; the percentage of students returning to college after the first and second half of the initial college year, or after each trimester of the initial college year; the percentage of students taking noncollege level classes in basic academic courses during the first college year, or remedial courses in basic academic subjects of English, mathematics, or reading; and other such data as determined by rule and regulation of the coordinating board for higher education."

### CURRENT STATUS

Overall postsecondary enrollment of public high school graduates in public in-state colleges and universities was essentially flat this year after several years of declines. Total enrollment of recent high school graduates declined 0.1 percent from fall 2021 to 2022, similar to the rate for overall headcount enrollment (-0.3 percent) for public institutions. Total enrollment in remediation continues to decline, from 16.9 percent in 2021 to 15.5 percent in 2022.

Fall-to-fall persistence has been generally stable in recent years. 76.3 percent of the incoming 2021 cohort re-enrolled in a public institution in fall 2022, compared to 75.4 percent from 2020 to 2021. 54.5 percent of incoming students in fall 2016 had earned a degree or certificate from a public two- or four-year institution by spring 2022. This is a slight decrease from 55.0 percent for the 2015 cohort.

#### Enrollment and Preparation

This year's report provides data about postsecondary enrollment and preparation of the public high school graduating class of 2022. Total enrollment of same-year Missouri public high school graduates in Missouri public institutions decreased by just 0.1 percent from 18,606 first-time full-time degree-seeking undergraduates in 2021 to 18,592 in 2022, but have declined 16.7 percent from 2012. Total public high school graduates increased by 0.1 percent in Missouri from 2021 to 2022.

First-time full-time degree-seeking undergraduates who were recent Missouri public high school graduates continue to become slightly more diverse each year. Black students increased to 7.4 percent of the cohort, comparable to 2020, Hispanic / Latino/a students increased to 6.5 percent, and Other / Unknown students (including multiracial students) increased to 7.0 percent of the total cohort. Detailed summary tables are included in the attachment to this item.

DHEWD continues to work with postsecondary institutions to encourage development of multiple math pathways and multiple measures for course placement, ensuring that only students who truly need remediation receive it, and that the form of remediation they receive is the most effective for both content mastery and career readiness. The department will continue to analyze the impact of corequisite supports—a form of remedial education designed to be taken at the same time as the college-level gateway course. The 2020 Report on

College and Career Readiness found that the corequisite model, when implemented, tends to lead to higher pass rates for the gateway course (math or English/writing) than the prerequisite model.

However, these successes are not equitably distributed across student populations – Black Missourians, adult Missourians and low-income Missourians are overrepresented in prerequisite remedial courses, which can lead to higher college costs and longer time to degree completion. National research also corroborates these findings – a December 2021 report from Complete College America found that the corequisite model yielded positive outcomes when implemented at the University System of Georgia. However, it also noted that Black students, Hispanic / Latino/a students, and low-income students were more likely to be placed in the prerequisite model.

Remedial Participation of Recent Missouri Public High School Graduates in Public Postsecondary Institutions					
	Fall 2018	Fall 2019	Fall 2020	Fall 2021	Fall 2022
<b>Total</b>	21.5%	19.8%	17.3%	16.9%	15.5%
<b>Math</b>	17.5%	15.9%	13.1%	12.5%	11.0%
<b>English</b>	8.2%	7.2%	6.5%	7.2%	7.1%
<b>Reading</b>	5.2%	4.4%	3.7%	3.3%	3.0%

#### Other Trends in Enrollment and Preparation

- Overall enrollment in remedial coursework and enrollment in remedial math have declined each year since fall 2012. Enrollments in remedial English/writing appear to have stabilized in recent years, while remedial reading again decreased slightly.
- Enrollment in non-credit (non-corequisite) remediation has historically been higher for women than men, although women tended to later persist and complete a degree or certificate at higher rates. In fall 2022, however, 15.5 percent of women and 15.4 percent of men were enrolled in at least one remedial course.
- Overall remedial enrollment and enrollment in math remediation continued to decline for most racial/ethnic groups, and although racial/ethnic gaps persist in enrollment, they are decreasing. In 2022, 26.3 percent of Black students were enrolled in at least one remedial course, compared to 13.8 percent of White students. This gap (12.5 percentage points) was 24.1 percentage points in fall 2018. The gap for math remediation was 7.4 percentage points, down from 19.7 in 2018. Similarly, 21.5 percent of Hispanic / Latino/a students were enrolled in at least one remedial course, a gap of 7.7 percentage points with White students, compared to 11.8 in fall 2018.

#### Performance and Retention in College

The Report on High School Graduates Performance also tracks several measures of student success and persistence in Missouri's public postsecondary sector. This year's report provides data about performance and retention in college for the public high school graduating class of 2021. Detailed summary tables are included in the attachment to this item. Among the more significant findings for this cohort are:

- Fall-to-fall retention, which has been generally stable in recent years, is 76.3 percent for the incoming fall 2021 cohort. Fall-to-fall retention rates ranged from 64.0 percent for Black students to 85.8 percent for Asian/Pacific Islander students. 77.4 percent of White students re-enrolled, as did 76.0 percent of Hispanic / Latino/a students.
- On average, this cohort completed 34.3 credits by the end of the spring 2022 term with a 3.02 grade point average (which was identical to the prior year's cohort). Asian/Pacific Islander students completed 39.3 credits with a 3.18 GPA, Black students completed 24.3 credits with a 2.45 GPA, and White

students completed 35.2 credits with a 3.08 GPA. Women completed 35.1 credits with a 3.08 GPA, compared to men, who completed 33.2 credits with a 2.94 GPA. Credits completed include dual/advanced credit completed prior to enrollment.

- Students at two-year institutions (open admissions) completed 28.6 credits through spring 2022 with a 2.86 GPA. Students at four-year institutions, including open admissions and moderately selective, selective, and highly selective institutions completed 39.3 credits through spring 2022 with a 3.16 GPA.

### **Degree Completion**

The timely completion of a certificate or degree is an additional indication of how well prepared Missouri's high school graduates are for college-level work. Detailed tables in the attachment to this item show the six-year degree completion rate of students beginning college in the fall of 2016. The findings include:

- 54.5 percent of incoming public Missouri high school students who entered as a first-time full-time degree-seeking undergraduate in fall 2016 had earned a degree or certificate from a public Missouri college or university by spring 2022. This is comparable to the rate for the 2015 cohort (55.0 percent). This rate does not account for transfer to or completion from an independent or out-of-state institution.
- 39.2 percent had earned a bachelor's degree, 18.4 percent earned an associate degree, and 3.2 percent earned a graduate or professional degree within six years. 8.7 percent earned an undergraduate certificate. Compared to the previous cohort, a slightly higher percentage earned associate degrees, and slightly fewer completed a bachelor's degree.
- Racial and ethnic disparities do persist; 62.2 percent of Asian/Pacific Islanders and 58.4 percent of White students earned a degree or certificate within six years, as did 30.5 percent of Black students and 47.0 percent of Hispanic / Latino/a students.

### **Next Steps**

DHEWD staff will continue to work on several fronts to encourage increased enrollment and persistence among recent high school graduates. For example, staff is examining models and practices in remedial education from across the country to update the best practices for Missouri's institutions and encouraging our institutions to examine different approaches to Guided Pathways to find a model that works best for their particular campus. In addition, DHEWD will continue outreach efforts to support increased FAFSA filing to encourage students to become more aware of their financial aid options, which also supports improved persistence and completion.

Furthermore, the Department has been leading the Adult Learner Network to address ways the postsecondary education and training system can be more accessible to and supportive of adult learners. This includes examining credit for prior learning and experience to help accelerate adults' time to degree, as well as collaborating with state and national organizations to better integrate equity into its work.

## **RECOMMENDATION**

This is an information item only.

## **ATTACHMENT**

- Enrollment and Preparation, Performance and Retention in College, and Degree Completion Tables

**Tab 7 Attachment**

**Enrollment and Preparation, Performance and Retention in College, and Degree Completion Tables**

**Enrollment and Preparation**

Table 1: Recent Public Missouri High School Graduate Enrollment by Sector, Gender, and Race/Ethnicity, 2012 to 2022													
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10-Year % Change	1-Year % Change
<b>Overall Enrollment</b>	22,312	22,022	22,593	21,426	21,836	22,160	22,067	20,850	19,529	18,606	18,592	-16.7%	-0.1%
<b>Two-Year</b>	10,442	10,394	10,693	9,295	9,771	10,423	10,401	9,899	9,378	9,330	9,276	-11.2%	-0.6%
	43.4%	47.2%	47.3%	43.4%	44.7%	47.0%	47.1%	47.5%	48.0%	50.1%	49.9%		
<b>Four Year</b>	11,870	11,628	11,900	12,131	12,065	11,737	11,666	10,951	10,151	9,276	9,316	-21.5%	0.4%
	56.4%	52.8%	52.7%	56.6%	55.3%	53.0%	52.9%	52.5%	52.0%	49.9%	50.1%		
<b>Women</b>	12,297	12,171	12,437	11,808	11,985	12,275	12,169	11,675	10,968	10,392	10,348	-15.8%	-0.4%
	55.2%	55.3%	55.0%	55.1%	54.9%	55.4%	55.1%	56.0%	56.2%	55.9%	55.7%		
<b>Men</b>	9,990	9,836	10,147	9,609	9,841	9,872	9,881	9,161	8,534	8,130	8,179	-18.1%	0.6%
	44.7%	44.7%	45.0%	44.9%	45.1%	44.5%	44.8%	43.9%	43.7%	43.7%	44.0%		
<b>Black / African-American</b>	2,207	2,208	2,112	2,010	2,140	2,060	1,987	1,794	1,471	1,287	1,370	-37.9%	6.4%
	7.3%	10.0%	9.2%	9.4%	9.8%	9.3%	9.0%	8.6%	7.5%	6.9%	7.4%		
<b>White</b>	17,118	17,209	17,773	16,769	17,008	17,184	17,036	15,925	15,201	14,478	14,187	-17.1%	-2.0%
	68.0%	78.1%	76.1%	78.3%	77.9%	77.5%	77.2%	76.4%	77.8%	77.8%	76.3%		
<b>Hispanic / Latino/a</b>	1,247	772	862	845	885	1,019	1,074	1,169	1,085	1,150	1,210	-3.0%	5.2%
	1.3%	2.1%	2.8%	3.9%	4.1%	4.6%	4.9%	5.6%	5.6%	6.2%	6.5%		
<b>Asian / Pacific Islander</b>	418	485	547	497	489	483	489	531	484	542	517	23.7%	-4.6%
	1.6%	2.2%	2.4%	2.3%	2.2%	2.2%	2.2%	2.5%	2.5%	2.9%	2.8%		
<b>Other / Unknown</b>	1,322	1,348	1,299	1,305	1,314	1,414	1,481	1,431	1,288	1,149	1,308	-1.1%	13.8%
	21.9%	7.5%	9.6%	6.1%	6.0%	6.4%	6.7%	6.9%	6.6%	6.2%	7.0%		

**Table 2: Recent Missouri Public High School Graduate Enrollment in Remediation by Institutional Admissions Selectivity; 2018 to 2022**

	2018	2019	2020	2021	2022
<b>Selective</b>	<b>8.9%</b>	<b>7.2%</b>	<b>4.5%</b>	<b>6.4%</b>	<b>4.5%</b>
Math	8.2%	6.5%	3.9%	5.5%	4.2%
English	1.4%	1.2%	0.8%	1.4%	0.5%
Reading	-	-	-		
<b>Mod Selective</b>	<b>12.0%</b>	<b>14.0%</b>	<b>18.8%</b>	<b>22.3%</b>	<b>20.4%</b>
Math	10.1%	9.8%	12.7%	14.6%	13.9%
English	3.8%	6.2%	7.7%	9.8%	8.7%
Reading		0.5%	0.2%		
<b>Open</b>	<b>33.4%</b>	<b>30.7%</b>	<b>26.1%</b>	<b>22.9%</b>	<b>21.6%</b>
Math	26.7%	24.7%	19.8%	17.1%	15.0%
English	14.0%	11.6%	10.1%	10.3%	10.8%
Reading	10.0%	8.4%	7.2%	6.3%	5.5%

**Source: Enhanced Missouri Achievement Study (EMSAS)**

**Table 3: Recent Missouri Public High School Graduate Enrollment in Remediation by Gender; 2018 to 2022**

	2018	2019	2020	2021	2022
<b>Women</b>	<b>22.8%</b>	<b>21.3%</b>	<b>18.3%</b>	<b>17.6%</b>	<b>15.5%</b>
Math	18.9%	17.8%	14.1%	13.1%	10.8%
English	8.2%	7.2%	6.6%	7.3%	7.2%
Reading	5.7%	4.6%	4.3%	3.5%	3.0%
<b>Men</b>	<b>19.8%</b>	<b>17.9%</b>	<b>16.0%</b>	<b>16.0%</b>	<b>15.4%</b>
Math	15.7%	13.5%	11.7%	11.7%	11.2%
English	8.1%	7.2%	6.3%	7.0%	6.9%
Reading	4.6%	4.2%	3.0%	3.0%	2.9%

**Source: Enhanced Missouri Achievement Study (EMSAS)**

**Table 4: Recent Missouri Public High School Graduate Enrollment in Remediation  
by Race / Ethnicity; 2018 to 2022**

	2018	2019	2020	2021	2022
<b>Black / African-American</b>	<b>42.4%</b>	<b>39.7%</b>	<b>32.2%</b>	<b>31.5%</b>	<b>26.3%</b>
Math	34.7%	31.4%	24.6%	23.3%	17.4%
English	24.1%	18.6%	15.2%	16.6%	15.4%
Reading	19.7%	16.2%	11.4%	11.2%	9.6%
<b>White</b>	<b>18.3%</b>	<b>16.6%</b>	<b>15.2%</b>	<b>15.2%</b>	<b>13.8%</b>
Math	15.0%	13.4%	11.5%	11.2%	10.0%
English	6.1%	5.5%	5.3%	6.0%	5.8%
Reading	3.1%	2.5%	2.6%	2.4%	1.9%
<b>Hispanic / Latino/a</b>	<b>30.1%</b>	<b>27.8%</b>	<b>22.7%</b>	<b>22.3%</b>	<b>21.5%</b>
Math	24.5%	22.2%	17.5%	16.8%	14.4%
English	11.4%	10.5%	8.7%	10.7%	10.2%
Reading	8.8%	7.8%	5.4%	5.0%	5.6%
<b>Asian / Pacific Islander</b>	<b>14.3%</b>	<b>14.3%</b>	<b>11.4%</b>	<b>9.4%</b>	<b>9.1%</b>
Math	12.3%	11.5%	8.1%	7.0%	5.4%
English	5.9%	5.5%	4.5%	6.5%	6.2%
Reading	4.9%	5.1%	3.3%	3.1%	3.9%
<b>Other / Unknown</b>	<b>26.1%</b>	<b>26.5%</b>	<b>23.0%</b>	<b>20.9%</b>	<b>19.9%</b>
Math	20.5%	21.3%	16.8%	15.3%	13.9%
English	9.1%	10.0%	9.4%	8.3%	9.6%
Reading	7.6%	8.2%	7.3%	4.6%	4.6%

**Source: Enhanced Missouri Achievement Study  
(EMSAS)**

## Performance and Retention in College

Table 5: Recent Missouri Public High School Graduate Retention by Gender and Race/Ethnicity; Fall 2021 - Fall 2022								
	Students	Completed Fall 2021	Avg. Fall 2021 GPA	Avg. Credits Completed (Fall 2021)	Completed Spring 2022	Avg. Spring 2022 GPA	Avg. Credits Completed (Spring 2022)	Enrolled Fall 2022
<b>Female</b>	10,399	97.7%	2.99	22.5	86.8%	3.08	35.1	76.7%
Black / African-American	782	96.7%	2.39	14.2	81.8%	2.52	24.8	65.1%
White	7,995	97.9%	3.07	23.6	87.5%	3.15	36.3	77.9%
Hispanic / Latino/a	678	97.2%	2.83	19.7	84.8%	2.91	32.4	75.5%
Asian / Pacific Islander	280	98.9%	3.25	27.3	93.9%	3.26	40.7	86.4%
Other / Unknown	664	97.3%	2.79	20.0	83.1%	2.92	32.6	72.7%
<b>Male</b>	8,131	97.5%	2.86	20.7	86.7%	2.94	33.2	75.8%
Black / African-American	488	96.7%	2.23	13.2	79.7%	2.35	23.6	62.1%
White	6,436	97.6%	2.93	21.3	87.5%	3.00	34.0	76.7%
Hispanic / Latino/a	467	97.2%	2.62	18.8	84.8%	2.73	31.0	76.7%
Asian / Pacific Islander	261	97.7%	3.09	24.6	92.3%	3.10	37.9	85.1%
Other / Unknown	479	97.3%	2.64	18.8	82.0%	2.79	31.5	71.4%
<b>Total</b>	18,614	97.6%	2.93	21.7	86.7%	3.02	34.3	76.3%
Black / African-American	1,290	96.7%	2.33	13.8	81.0%	2.45	24.3	64.0%
White	14,480	97.7%	3.01	22.5	87.5%	3.08	35.2	77.4%
Hispanic / Latino/a	1,152	97.2%	2.74	19.3	84.6%	2.84	31.8	76.0%
Asian / Pacific Islander	542	98.3%	3.17	26.0	93.2%	3.18	39.3	85.8%
Other / Unknown	1,150	97.3%	2.72	19.5	82.5%	2.87	32.1	72.2%

**Source: Enhanced Missouri Achievement Study (EMSAS)**

Table 6: Recent Missouri Public High School Graduate Retention by Sector and Race/Ethnicity; Fall 2021 - Fall 2022								
	Students	Completed Fall 2021	Avg. Fall 2021 GPA	Avg. Credits Completed (Fall 2021)	Completed Spring 2022	Avg. Spring 2022 GPA	Avg. Credits Completed (Spring 2022)	Enrolled Fall 2022
<b>Public 2Y</b>	9,330	96.7%	2.70	17.6	81.6%	2.86	28.6	67.1%
Black / African-American	605	95.2%	2.11	11.4	75.2%	2.31	20.4	56.4%
White	7,301	96.8%	2.78	18.4	82.3%	2.92	29.4	67.7%
Hispanic / Latino/a	672	96.4%	2.55	16.7	80.5%	2.72	27.9	70.4%
Asian / Pacific Islander	202	96.5%	2.80	18.2	88.1%	2.88	27.7	71.8%
Other / Unknown	550	97.1%	2.43	15.6	77.6%	2.70	26.7	64.9%
<b>Public 4Y</b>	9,284	98.6%	3.16	25.6	91.9%	3.16	39.3	85.5%
Black / African-American	685	98.0%	2.51	15.9	86.1%	2.56	27.4	70.7%
White	7,179	98.7%	3.23	26.7	92.7%	3.23	40.5	87.2%
Hispanic / Latino/a	480	98.3%	3.01	22.9	90.4%	2.99	36.6	84.0%
Asian / Pacific Islander	340	99.4%	3.39	30.5	96.2%	3.35	45.6	94.1%
Other / Unknown	600	97.5%	2.99	23.0	87.0%	3.01	36.6	78.8%

**Source: Enhanced Missouri Achievement Study (EMSAS)**



## Degree Completion

**Table 7: Recent Missouri Public High School Graduate Six-Year Completion Rate by Gender and Race/Ethnicity; Fall 2016 through Spring 2022**

	Students	Total Completions	% Completed Certificate	% Completed Associate	% Completed at Least Bachelor's	% Completed Graduate / Professional
<b>Female</b>	<b>11,985</b>	<b>57.2%</b>	<b>9.6%</b>	<b>19.4%</b>	<b>41.4%</b>	<b>3.7%</b>
Black / African-American	1,266	33.6%	4.5%	8.3%	26.4%	1.0%
White	9,265	61.3%	10.2%	21.3%	44.1%	4.0%
Hispanic / Latino/a	483	48.2%	11.8%	18.8%	34.4%	2.5%
Asian / Pacific Islander	252	64.7%	8.7%	15.5%	50.8%	7.9%
Other / Unknown	719	48.3%	9.9%	16.3%	34.4%	3.3%
<b>Male</b>	<b>9,841</b>	<b>51.3%</b>	<b>7.7%</b>	<b>17.2%</b>	<b>36.6%</b>	<b>2.6%</b>
Black / African-American	868	26.2%	3.1%	8.2%	19.9%	0.9%
White	7,741	54.8%	8.1%	18.4%	39.1%	2.8%
Hispanic / Latino/a	402	45.5%	9.5%	15.4%	32.3%	1.2%
Asian / Pacific Islander	237	59.5%	10.1%	16.0%	48.1%	3.0%
Other / Unknown	593	42.0%	7.1%	16.5%	27.3%	2.7%
<b>Total</b>	<b>21,836</b>	<b>54.5%</b>	<b>8.7%</b>	<b>18.4%</b>	<b>39.2%</b>	<b>3.2%</b>
Black / African-American	2,140	30.5%	3.9%	8.3%	23.7%	1.0%
White	17,008	58.4%	9.2%	20.0%	41.8%	3.5%
Hispanic / Latino/a	885	47.0%	10.7%	17.3%	33.4%	1.9%
Asian / Pacific Islander	489	62.2%	9.4%	15.7%	49.5%	5.5%
Other / Unknown	1,314	45.4%	8.6%	16.4%	31.1%	3.0%

**Source: Enhanced Missouri Student Achievement Study (EMSAS)**

**Table 8: Recent Missouri Public High School Graduate Six-Year Completion Rate by Institutional Admissions Selectivity; Fall 2016 through Spring 2022**

	Students	Total Completions	% Completed Certificate	% Completed Associate	% Completed at Least Bachelor's	% Completed Graduate/Professional
Highly Selective	742	77.8%	0.4%	2.7%	75.2%	10.5%
Selective	7,047	71.0%	10.5%	4.1%	67.0%	5.0%
Moderately Selective	3,497	55.3%	3.5%	4.4%	52.1%	2.4%
Open	10,140	42.2%	10.1%	33.2%	14.2%	0.5%

**Source: Enhanced Missouri Student Achievement Study (EMSAS)**